



WORKING PAPER

School Meals Case Study: Ukraine

Prepared by the Research Consortium for School Health and
Nutrition, an initiative of the School Meals Coalition

Submitted by:

NGO 'National Foodservice Association'
School Nutrition Reform Project Office

With the support of the United Nations Children's Fund, UNICEF

April 2024

Table of contents

Country profile	1
Population and economics	1
Education.....	1
Food security, nutrition and health.....	2
Design and implementation of the school meal programme	2
Background.....	2
Objectives	3
Coverage.....	4
Targeting.....	5
Meal type.....	5
Nutritional norms	5
Food procurement.....	6
Legal framework and policy evaluation	6
Costs of implementation	7
Financing	8
Monitoring and evaluation.....	9
Lessons learned and best practices.....	9
Challenges	10
Acknowledgements	12
Related resources and data sources	12
Corresponding authors.....	13

Caveat: The Consortium’s Case Studies working papers are preliminary versions of research papers that have not been published in a journal or vetted through a peer-review process. The purpose of circulation is to share existing data, facilitate comparative analysis, and stimulate collaborations. The contents or opinions expressed in the paper are the sole responsibility of the author(s) and do not necessarily reflect the views of the Research Consortium for School Health and Nutrition or the School Meals Coalition. Any errors of commission or omission are those of the authors and should not be attributed to any of the aforementioned entities.

Country profile

Population and economics

Ukraine is one of the largest countries in Europe by area. The Ukrainian economy has traditionally relied on manufacturing, agriculture, and the service sector. According to data from the State Statistics Service, the population of the country was about 41 million people in October 2021. However, the Russian invasion of Ukraine has led to dramatic changes to the country's demographic and economic structure. After the occupation of Crimea and the territories of Donetsk and Luhansk regions in 2014, a large number of Ukrainians were forced to move outside of the country, dropping the population to 38 million people according to the National Academy of Sciences of Ukraine. Since the start of the war in 2014, the number of people living and working in Ukraine decreased by 6.7 million—in part due to leaving the country or living in currently occupied territories.

Table 1: Key data on population and economic indicators

Total population	Total number of population aged 5 to 18	Total number of population employed in agriculture sector	Gross Domestic Product per capita
40 997 698 (2021)	6 533 40	26 927 *	131 734 UAH **
27 800 000 (2023)			

* The number of employed population in agriculture, forestry and fisheries in 2021

** This data accounts for changes in the balance of payments indicators of the National Bank of Ukraine (2021)

Due to the Russian invasion, the country has not been able to conduct an updated survey of the population. According to the World Bank¹, two years of war has had a devastating impact on Ukraine's economy, leading to large-scale migration and the impoverishment of 7.1 million people. However, despite the destruction of many businesses and the reduction of revenues to the country's budget, vital government and social services have been maintained with the support of the international community. Schools continue to operate through multiple mechanisms: education of children and adolescents (hereafter referred to as 'children') ages 6-18 are available through remote, in-person, or mixed classes, including in the regions on the frontline of the war.

Education

According to the Ukrainian Constitution, a complete general education is mandatory for all children. Since the introduced reform of the National Academy of Sciences, pupils attend school for 12 years and the average age of graduation is 18 years. The government ensures equal access to education regardless of age, sex, race, health, disability, citizenship, nationality, political, religious or other beliefs, skin colour, place of residence, language proficiency, social and property status, or criminal record. Different levels of education continue to be offered including preschool, primary and secondary, extracurricular, professional (vocational-technical), professional pre-higher, higher education, and adult education.

¹ Available at: <https://thedocs.worldbank.org/en/doc/7c94f7225817d3ab7da9359be76a055f-0080012023/original/Resilience-two-pager-final.pdf>

In Ukraine, the educational framework adheres to a 4-5-3 model that includes primary, basic secondary, and specialized secondary levels. Primary school typically commences at age 6 and spans 4 years, secondary education lasts for 5 years, and specialized secondary education lasts for 3 years².

Table 2: Operational data according to the "Report of the institution of general secondary education"

Total number of students	Total number of IGSE	Number of classes in IGSE	Average class size	Number of children receiving school meal	Percentage of children eligible for free school meals	Number of pupils in grades 1–4	Percentage of children eligible for free school meals
3 903 875	12 707	194 805	20.04	1 544 405	46% (713 220 pupils)	726 611	55% (399 078 pupils)

* IGSE - institution of general secondary education

Table 3: Number of children according to the state statistical "Report on the number of school-age children"

	Female	Male	Total
Number of children over 5 years old	153 512	201 822	355 334
Number of children aged 6 to 18 years	2 090 612	2 202 250	4 292 862

Food security, nutrition and health

Food insecurity:

- **Stunted children from 5 to 19 years (%): 0.6%**
- **Micronutrient deficiency from 5 to 19 years: 1.3 (%)**
- **Thinness in children from 5 to 19 years: 0.4 %**
- **Overweight in children from 5 to 19 years (%): 0.8 %**
- **Obesity in children from 5 to 19 years (%): 0.9 %**

Data on obesity rates (and other health outcomes) from Ukraine's Electronic Health Care System (EHCS) are presented in Annex 1.

Design and implementation of the school meal programme

Background

Prior to the reform: In the aftermath of the dissolution of the Soviet Union, Ukraine initiated a comprehensive overhaul of its educational system. The primary goal was to enhance the quality of education and ensure that children had access to nutritious school meals. Despite these reforms, the STEPS survey conducted in 2019 highlighted significant behavioural risk factors prevalent among Ukrainians. These factors, including low fruit and vegetable consumption and high intake of processed, high-salt foods, contribute to non-communicable diseases and reduced life expectancy. While physical inactivity remains an issue in Ukraine, physical activity levels are on average higher in Ukraine compared with other countries in the WHO European Region.

² Law of Ukraine "On comprehensive secondary education" Available at: <https://zakon.rada.gov.ua/laws/show/463-20#Text>

Responding to these issues, the First Lady of Ukraine, Olena Zelenska, and the Government of Ukraine jointly launched the school meal reform in 2019. According to experts, the main issues regarding school meals before the reform were attributed to the low quality of food, the outdated infrastructure and equipment, the poor training of cooks, the lack of proper control of sanitary conditions in school canteens, and the outdated regulatory framework. Some students did not like the quality of the school meals, and school meal participation was low.³

Launch of the school meal reform: The First Lady's initiative was actively supported by ministry representatives, state bodies and structures, as well as national public organizations, associations, volunteers, and activists. International partners and donors also joined the efforts to support the school meal reforms. A primary challenge was the need to develop a universal, but flexible approach to overcome the difficulties faced by the local authorities in managing food provision. Therefore, in August 2020, the Government of Ukraine adopted a comprehensive national action plan for the reform and improvement of school meals in Ukraine. A number of corresponding legislative changes were developed and approved to further ensure the effective implementation of changes.

The development and creation of a new, healthy menu for schools with reduced sugar and salt content also began in collaboration between government officials, activists, and international partners. Additionally, updates were made to support vocational education and the development of a system for improving the qualifications of employees who are responsible for cooking in educational institutions.

Implementation of the school meal reform: COVID and the war greatly impacted the implementation of the reform but reinforced its importance. Amidst this challenging situation, school meals became the primary substantial meal of the day for many pupils. Therefore, since the spring of 2022, work on the reform intensified - and enabled the implementation of a number of critical projects, with international support. Moreover, the government succeeded in launching an effective universal management system which provides a transparent and comprehensive approach to modernizing outdated school infrastructure. This tool ensures that school canteens are meeting modern requirements, while also taking into account the needs of local communities and ensuring children have equal access to healthy food both in large cities and in small villages. In addition, the introduction of this model is an effective tool for saving money, water, and energy resources.

In 2022, work was started on the National School Nutrition Reform Strategy, which was approved by the Government in October 2023. This strategy became the basis for the development of regional programs for the implementation of school nutrition reforms and help communities determine priority areas of work.

Objectives

Initially, the primary goal of the school nutrition reform was to modernize the school feeding system in order to ensure children had equitable access to healthy school meals, to encourage the formation of healthy eating habits, and, as a result, to promote a healthy society. It also aimed to strengthen support and social protection for children in preferential categories (at greatest risk of food insecurity or adverse health effects). However, since its launch, the objectives, priorities, and challenges have evolved. In fact, due to the war in the country, over 200 schools were destroyed. Although this is a challenge insofar as they have to be rebuilt and restored, they also offer the opportunity to meet new canteen requirements. The number of children in the highest risk categories has increased significantly, including those with

³ More references are available in annex 2.

internally displaced persons (IDP) status, lost one or more parent, and/or at greatest risk of food insecurity. Therefore, finding ways to provide such children with free meals in schools has become one of the priorities of the reform.

Strategic goals of school nutrition reform are defined and outlined in the Strategy for reforming the school nutrition system through a four-year implemented plan (2023-2027) and are reflected in the operational implementation measures in 2023-2024 (hereinafter referred to as the Strategy)⁴:

- Increase the financial stability and institutional favourability (competence in management processes) of communities.
- Restore and modernize the canteens and improve compliance with “Hazard Analysis Critical Control Point” (HACCP) requirements.
- Develop a workforce pipeline and improve the qualifications of cooks for school canteens. Implement new food standards and menus.
- Promote a healthy food culture in Ukraine.

Coverage

As of October 2023, the Ministry of Education and Science of Ukraine has been designated as responsible for implementing of the operational plan for the school nutrition reform. In addition, the active involvement of national and international non-governmental organizations, public associations, activists, and experts are also supporting implementation of Ukraine’s school meal programme. Details on the delineation of responsibilities among the relevant ministries and other government agencies in Ukraine are provided in annex 3 and 4. According to official data of the state scientific institution "Institute of Educational Analytics", in the 2022/23 academic year, 12,926 institutions of general secondary education continue to operate, 8726 of which (67.5%) have canteens.

Totally, 1,544,405 pupils are provided with meals in institutions of general secondary education, almost half of them – 713,220 (46%) have free meals. The number of internally displaced children who receive free hot meals in general secondary education institutions is 53,316, which is twice as much as the total number of internally displaced persons last school year (24,857). At the same time, compared to the 2021/22 academic year, both the number of children who eat school meals and the number of children who receive free school meals have halved.

According to the results of the survey, in which 7,940 (61%) general secondary education institutions took part, it was found on average 60% of pupils eat in educational institutions (38% of meals at the expense of their parents, 22% meals are free of charge, 40% of pupils do not eat in institutions). However, not all educational institutions can provide meals:

- 54.4% of general secondary education institutions organize it for all pupils;
- 7% organize it only for preferential categories;
- 26.5% institutions work remotely or in a mixed format, so there is no meals in them;
- 12.1% are unable to arrange meals during full-time education.

Most often, the respondents cited issues regarding electricity supply and other communications, food supply, lack of sufficient funding in the local budget and others.

Among other reasons, the respondents mentioned the following:

- lack of infrastructure for school meals;
- lack of suppliers and problems with logistics obtaining the foods.

⁴ Decree of the Cabinet of Ministers of Ukraine of October 27, 2023 No. 990-p On the approval of the Strategy for reforming the school food system for the period until 2027 and the approval of the operational plan of measures for its implementation in 2023-2024: [Available here](#).

Targeting

Children in the most at-risk categories are particularly targeted, including internally displaced children (IDPs), those who have lost one or more parents, and/or those most at risk of food insecurity. Finding ways to provide these children with free school meals has become one of the priorities of the reform.

Meal type

Since the launch of the Reform, several options for the organization of meals in educational institutions were developed and subsequently approved by Ukraine's legislature. The Decree of the Government of Ukraine requires the diversification of approaches to the organization of school meals. Its overall organisation depends on the availability of equipment, employees who prepare food, and other relevant factors. The financial capacity of the community also plays an important role, as well as the ability to obtain supplies and attract food service management companies for educational institutions.

In schools and preschools meals are based on hot meals in case of 2-5 meals per day and on breakfasts in case of 1 meal per day.

The example of one dinner is: pea soup; mashed potatoes with oregano; stewed fish with vegetables in tomato sauce; salad from cabbage, green peas with sunflower seeds; whole grain bread; tomato juice; cheese; apple.

Three approaches are typically implemented:

- preparation of meals by full-time employees of educational institutions. The institution organizes meals itself. This method is the most common (68.9% of the schools).
- outsourcing: a school is financially autonomous and decides to put an external entity in charge of the service.
- catering is when the school meals service is managed at the local authority level which hires a private company to serve some schools. As a result, up to 40 schools can be supplied with meals. However, this method is currently not typically used.

Catering is now allowed in Ukrainian educational institutions, which must meet all food safety requirements. The reform defines that catering is a way of organizing meals for pupils/children, which involves the delivery and sale of pre-packaged, ready-to-eat meals prepared by a food service management company that supplies food services. The catering option is also appropriate for school meals for educational institutions with a small number of pupils.

Nutritional norms

The country encourages all schools to promote healthy eating and provide healthy, tasty and nutritious food and beverages. Compliance with the requirements approved by the Cabinet of Ministers of Ukraine is mandatory for all educational institutions. The energy and nutritional composition of food, including macro- and micronutrient content, align with age-specific nutritional requirements established by the Ministry of Health of Ukraine.

Planning the caloric content depends on the number of meals offered in the institution (one-time, two-times, three-times, four-times, five-times). Depending on the age group (6-11 years, 11-14 years, 14-18 years) and the diet, different qualities of food groups are provided. It is compulsory to indicate the presence of allergens on the menu, which is governed by the Ukrainian law "On consumer information concerning food products".⁵

⁵ Law of Ukraine "On information for consumers regarding food products": Available at: <https://zakon.rada.gov.ua/laws/show/2639-19#Text>

There are currently limits for sodium and sugar in school meals and for food products sold outside of the school meal programme (e.g., in vending machines). Such food products must be without the addition of sweeteners, synthetic colors and flavors (except vanillin, ethyl vanillin and vanilla extract), flavor and aroma enhancers. It is prohibited to order and use/sell ultra-processed foods (sausages etc.) meat and fish products, as well as products containing partially hydrogenated vegetable fats (trans fats) in educational institutions and health and recreation facilities.

Food procurement

Ensuring a transparent procurement mechanism for school meals is a priority of the reform. All types of purchases (purchases of food products, food services, and catering), aimed at providing food for children are required to be in compliance with the Law of Ukraine "On Public Procurement" and take into account specific resolutions⁶.

If food is prepared at the educational institution within the canteen, the manager (or other administrator within the educational institution) buys the products necessary for cooking. In the case catering or outsourcing, the administrator at the educational institution purchases the services. Administrators procuring school meals for educational institutions can be both individual schools or decentralized local education management bodies (Education Department at the local community) within a community. Purchases are carefully planned for the financial year and can be carried out both by public procurement specialists from among the employees of institutions (primarily) or outsourced.

The law clearly defines the value limits of purchases and the types of procedures that can be applied. All purchases take place publicly on various electronic platforms of the Prozorro system or through the electronic marketplace, Prozorro Market, and are carefully monitored and controlled by the relevant auditing bodies. The main criterion for choosing the supplier is the price. All other requirements are documented by the educational institution in the tender documentation. Advantages are given to experienced suppliers with the necessary equipment and resources to provide the school meals. The quality of food products must be confirmed by certificates. Favoring certain food producers or exclusively local producers are legally defined as discriminatory. However, for educational institutions in rural areas, local agricultural producers are often the only available food suppliers.

Legal framework and policy evaluation

The first stage of the implementation of the reform began in 2020 and was fully implemented by 2023. In August 2020, the Government of Ukraine adopted a comprehensive national action plan to promote the reform and to improve the nutritional profile of school meals by the order of the Cabinet of Ministers of Ukraine on August 5, 2020 (No. 1008). In the course of its implementation, an updated regulatory and legal framework was developed, namely:

- Ensuring sufficient funding and improving the cost-effectiveness of the school meal programme;
- Modernizing the school food system using the latest technologies, improving energy efficiency, and compliance with Hazard Analysis Critical Control Point (HACCP) standards;
- Supporting school food employees, such as through trainings and other educational opportunities;

Encouraging healthy food choices among students. An important step in state policy was the declaration by the Cabinet of Ministers of Ukraine of the government's position on joining the

⁶ Resolution of the Cabinet of Ministers of Ukraine dated October 12, 2022 No. 1178.

Global School Meals Coalition)⁷. In addition, on April 7, 2023, the Concept of Security of Educational Institutions was adopted at the government meeting. The action plan for the implementation of the National Strategy for the development promotes a safe and healthy educational environment in the new Ukrainian school for 2023, the development of a system of healthy nutrition, and the formation of healthy eating habits. The resolution of the Cabinet of Ministers of Ukraine⁸ prompted development of a vision for its implementation in the next stages (2023-2024, 2024-2027) taking into account the consequences of a war of the Russian Federation on the territory of Ukraine.

Costs of implementation

Table 4: Overview of the school meals costs

	Grades 1-4	Preschool	Grades 5-11	Secondary education
Number of children	439 100	826 872	3 758 717	4 197 817
Preferential category	181 300	12 265	201 544	382 875
Cost per meal	26.42 UAH (0.7 USD) From 12.5 to 50.9 UAH (0.33 to 1.35 USD)	41.4 UAH (1.1 USD) From 12.3 to 40 UAH (0.33 to 1.06 USD)	27.5 UAH (0.75 USD)	-
Receive meals	-	400 157	-	1 065 570
Number of teaching days per year in one academic year	175	175	175	175
Number of school meal days in one academic year	175	175	175	175

Provision of free hot meals for all pupils in grades 1-4, pupils of preferential categories in 5-11 grades in 2024. World Food Programme (WFP) currently provides partial reimbursement for approximately 60 000 pupils for school meals access (420 schools in 11 regions across Ukraine), prioritizing schools with a higher percentage of IDP pupils and providing free meals to all pupils within those schools. Funds from local budgets are used to provide rest of meals for preferential categories of pupils. Financially insolvent communities do not have their own financial resources to provide hot meals for pupils of preferential categories in alignment with the current school meal standards. In 2023, 439 100 pupils of 1-4 grades, including 181 300 children of preferential categories, were provided with hot meals. The average cost of one serving of food, approved by local councils, is 26.42 UAH (0.7 USD). The estimated cost of expenditures provided by local budgets for providing free hot meals to pupils in 1-4 grades in the 2022/2023 academic year was 2 030 178 UAH (53 850 USD).

Addressing social inequality and providing children of preferential categories with equal opportunities in access to balanced healthy nutrition.

⁷Resolution No. 1179 of November 10, 2023 "On the Joining of the Government of Ukraine to the International Coalition "School Meals: Nutrition, Health and Education for Every Child". [Available here](#).

⁸ Resolution October 27, 2023 No. 990-p "On the approval of the Strategy for reforming the school food system for the period until 2027 and the approval of the operational plan of measures for its implementation in 2023-2024". [Available here](#).

Financing

The school nutrition reform requires significant financial resources for implementation. Additionally, the ongoing war with Russia has led to a greater need for school meals as a social safety net among children at risk for food insecurity. Many educational institutions and infrastructure were destroyed. Therefore, the two main areas prioritized for funding were: (1) provision of free meals for pupils in grades 1-4 and children of preferential categories; and (2) modernization and restoration of canteens of educational institutions.

Key partners have also played a critical role in supporting Ukraine during the war. Therefore, funding for the implementation of the school nutrition reform comes from the following sources: state and local budgets and aid from the international community. For example, in February 2023, a Memorandum of Understanding and Cooperation on the implementation of the school feeding programme was signed between the Ministry of Education and Science of Ukraine and the UN World Food Programme in Ukraine. As part of the implementation of the Memorandum, the World Food Programme of the United Nations provided financial assistance to communities, which made it possible to improve the nutrition of pupils through a pilot project in 58 primary schools within the region of Kyiv. In 2022-2023, the school nutrition reform team led by the Office of the First Lady actively worked with partners and donors on opportunities to attract financial assistance to modernize the infrastructure of school food systems and implement the latest technology.

In 2023, thanks to the Howard Buffett Foundation, the construction of a kitchen factory in the Kyiv region was completed and it will be open soon, which will support the production of school meals for approximately 10,000 children in the region. A similar kitchen factory will be built in Lozova, Kharkiv region, which will support meal production for approximately 13,000 children.

In the 2023-24 school year, the project has expanded to 14 regions and approximately 720 schools.

Joint work with the Embassy of Switzerland on the project of a support kitchen in the Poltava region has also begun, which will provide food for five educational institutions within the region.

The State Budget for 2023 includes the following budget programs:

- "Fund for liquidation of the consequences of war": 61.7 billion UAH (1,636,604,774 USD), of which 1.7 billion UAH (45,092,838 USD) for educational institutions (chief manager is Ministry of Infrastructure of Ukraine) and 1.032 billion UAH (27,374,005 USD) for educational institutions (chief manager is Reconstruction Agency);
- "Subsidy from the state budget to local budgets for the design, restoration, construction, modernization, arrangement, repair of construction objects of public purpose, social sphere, cultural heritage, housing and communal services, other objects that have an impact on the life of the population, in accordance with the resolution of the Cabinet of Ministers of Ukraine dated June 16, 2023 No. 608": 4.5 billion UAH (119,363,395 USD), of which 1.1 billion UAH (29,177,718 USD) is for educational institutions.

The draft of State Budget for 2024 includes the following budget programs:

- "Subsidy from the state budget to local budgets for the implementation of projects within the framework of the Program for the Reconstruction of Ukraine": 4.5 billion UAH (119,363,395 USD);

- "Subsidy from the state budget to local budgets for the implementation of projects within the framework of the Emergency Credit Program for the Reconstruction of Ukraine": 2.4 billion UAH (63,660,477 USD);
- "Subsidy from the state budget to local budgets for the purchase of equipment, modernization (reconstruction and overhaul) of canteens (food blocks) of general secondary education institutions": 1.5 billion UAH (39,787,798 USD);
- Subsidy from the state budget to local budgets for the creation of educational and practical centers of modern professional (vocational and technical) education: 500.0 million UAH (13,262,599 USD).

Monitoring and evaluation

Currently, the Ministry of Education and Science of Ukraine and the Ministry of Health support the monitoring process to ensure that the educational aspects of the reform are taken into account. Additionally, the State Service for Sanitary Supervision of Food Products and Consumer Protection (SPCS) is responsible for monitoring and ensuring the safety of food products, particularly as they relate to compliance with HACCP standards in educational institutions. Disease control and prevention centers play an important role in determining the impact of the reform on the health of pupils.

In partnership with the DECIDE project, the Ministry of Education and Science of Ukraine has developed a digital solution for monitoring reform needs. Specifically, the innovative educational application "Dream" will help with monitoring as well as nutrition information for school meals. In addition, in order to obtain a complete picture of the effectiveness of the implementation of the reform, surveys among relevant personnel will be surveyed beginning in 2024.

Lessons learned and best practices

The school nutrition reform focuses on the issue of food quality in educational institutions in Ukraine. This initiative received support both at the country level and from the public.

Internal and external support: representatives of ministries, public organizations and volunteers and activists, as well as international organizations, foundations, representative offices of other nations collaborated effectively to implement the reform.

As a result, many successful initiatives were implemented within a short time, laying the foundation for its continued implementation.

Modernization of infrastructure: Three technological models of food organization were developed as basic kitchen, support kitchen, kitchen factory. With the support of the Howard Buffett Foundation, the construction of kitchen factories has begun in Kyiv and Kharkiv regions. These projects function as pilot projects with plans to further expand the network of kitchen factories throughout Ukraine. This opens up opportunities to improve children's nutrition and ensures the sustainability of the reform.

Development of personnel potential: In June-July 2023, work began on the creation of culinary hubs in three regions (Odesa, Poltava, Ternopil), and the necessary equipment was purchased. These culinary hubs will be used to train employees of school food programmes using newly developed materials and curriculum. The training of chef-trainers is being conducted in these hubs among approximately 600 chefs who will transfer their acquired knowledge and skills to colleagues in their regions as "agents of change."

Regulatory changes: The Resolution of the Cabinet of Ministers of Ukraine⁹ together with the NGO "National Foodservice Association" will support the introduction of the latest models of food organization and allows the organization of catering in preschool institutions.

Accessibility regulations: Organization of meals for pupils in grades 1-4, support of local self-government bodies in providing free food for pupils of 1-4 grades and preferential categories.

Attracting funding from donors and partners: A specific resolution of the Cabinet of Ministers¹⁰ approved the mechanism of financial support for hot meals for pupils of 1-4 grades from the funds of the UN World Food Programme. Therefore, a normative legal act has been developed that will allow to attract donor funds to local budgets to partially cover costs for the organization of hot meals in educational institutions, which is provided for in the Operational Plan for 2023-2024 for the implementation of the Strategy for reforming the school nutrition system for the period 2023-2027.

Educational resources and "Znaimo" portal: The "Znaimo" portal was created, which became a tool for training and informing managers, educators, parents and representatives of businesses about the meals in educational institutions. More than 4700 primary school teachers have completed the "Healthy Nutrition" course and are using new materials for nutrition education for pupils. In September 2023, the President of Ukraine Volodymyr Zelenskyi presented the innovative educational application "Dream". It will contain an appropriate information block on school meals.

As part of the school nutrition reform initiated by the first lady of Ukraine, Olena Zelenska, the Ministry of Agrarian Policy, with the support of the State Production and Consumer Service and the EU4SaferFood project, developed special free online courses. Staff related to children's canteens, heads of schools can undergo training on the practical implementation of food legislation in educational institutions.

The training includes a basic course on "Practical aspects of the fulfilment by educational institutions of the requirements of food legislation" and an advanced one on "Implementation of procedures based on the principles of HACCP in food blocks of educational institutions."

Challenges

After the beginning of war of the Russian Federation in Ukraine, almost 4.8 million jobs were lost, and consumer inflation in June 2022 exceeded 20 percent. The number of refugees currently exceeds 6 million people, and there are approximately 5 million internally displaced persons. Considering these and other global challenges, the school nutrition reform system becomes even more relevant in the context of the recovery of Ukraine, the social protection of vulnerable segments of the population, as well as supporting the psychological wellbeing of citizens through sufficient access to healthy foods.

One of the biggest challenges of the school nutrition reform with the beginning of the war was the provision of high-quality and nutritious food for pupils in grades 1-4 and rising numbers of other children in categories of special concern. As a result, even in regions that are far from the front line, there are significant impacts on children. In particular, there is an increase in the burden on local budgets due to the large number of internally displaced persons and children who need additional support.

Security throughout the country more broadly also remains an issue due to the constant shelling of civilian infrastructure. Therefore, for normal functioning, all educational institutions need full-fledged storage facilities with appropriate equipment and shelters. The

⁹ Amendments to the Procedure for the Organization of Food in Educational Institutions and Children's Health and Recreation Institutions

¹⁰ Resolution on the implementation of a joint project with the World Food Program of the United Nations on providing financial support to general secondary education institutions in the 2023/24 academic year

capacity of a shelter determines how many students can attend lessons in person. The further development of the school nutrition reform system is conditioned, in particular, by:

- the increase in food prices and the decrease in the level of local government's ability to provide food for pupils in accordance;
- the need to restore damaged or destroyed educational institutions;
- changes in the market of suppliers of food products and catering services;
- the lack of full-time employees in educational institutions and the need to develop the professional competences of the canteen staff and food service management companies;
- military threats, in particular to social and energy infrastructure;
- the acceptability of school meals based on palatability and food preferences.

According to the survey described previously (see coverage section), 301 educational institutions from among the respondents suffered damage or destruction of the premises of the school meal infrastructure as a result of war; 232 institutions lost their equipment due to the war and/or occupation. About 7% of schools also provide food to other groups of the population in addition to pupils. However, not all educational institutions have enough cooks and production capacity even for their own needs.

The biggest problems of educational institutions include the following:

- outdated or insufficient equipment, dishes and furniture;
- air alarms and power outages;
- lack of facilities and an urgent need for repairing;
- insufficient funding, in particular for obtaining foods that meet the food standards.

Acknowledgements

The start of work on the modernization of the system of providing food for children in schools and preschools of Ukraine became possible due to the initiative of the first lady Olena Zelenska. We thank her constant support and coordination of the process, involvement in work with partners and donor organizations that made possible to achieve such significant results during the three years of project implementation. The legislative framework of the reform was changed and brought into line with today's needs, develop new tools for the organization of food in educational institutions, formulate and approve the national Strategy for school nutrition reform, and develop a step-by-step action plan. The result of constant and persistent work of Ms. Olena Zelenska was cooperation with the Charitable Foundation of Mr. Howard Buffett and the completion of the first kitchen factory in Ukraine in the Kyiv region and the start of work on a similar kitchen factory in the Kharkiv region.

During this time, representatives of relevant ministries and state bodies and structures are also actively working on the reform: the Ministry of Education and Science of Ukraine, the Ministry of Health of Ukraine, the Ministry of Community Development, Territories and Infrastructure of Ukraine, the Ministry of Economy of Ukraine, the State Production and Consumer Service, the State Audit Service, and the Antimonopoly Committee.

Representatives of public organizations also took an active part in the work on the changes: NGO "Public Foodservice Association", CultFood and others.

Of course, the implementation of many projects within the school nutrition reform would be impossible without the active participation and assistance of our partners: UNICEF, DECIDE, The Howard G. Buffett Foundation, Embassy of Switzerland in Ukraine, Embassy of Estonia in Ukraine, World Food Programme, World Health Organization, "Let's act for health".

We thank the entire reform team - everyone who participated in creating a healthy future for Ukraine. But, we sincerely hope that communities and local self-government bodies, which will be responsible for implementing changes, will also actively and devotedly work to ensure equal access to quality and nutritious food for all children in the country.

Related resources and data sources

State Statistics Service of Ukraine. Available at: www.ukrstat.gov.ua

Resilience. Listening to Ukraine: Access to social services and income support. <https://thedocs.worldbank.org/en/doc/7c94f7225817d3ab7da9359be76a055f-0080012023/original/Resilience-two-pager-final.pdf>

Law of Ukraine "On Comprehensive Secondary Education" Available at: <https://zakon.rada.gov.ua/laws/show/463-20#Text>

Decree of the Cabinet of Ministers of Ukraine of October 27, 2023 No. 990-r On the approval of the Strategy for reforming the school food system for the period until 2027 and the approval of the operational plan of measures for its implementation in 2023-2024. <https://www.kmu.gov.ua/npas/pro-skhvalennia-stratehii-reformuvannia-systemy-shkilnoho-kharchuvannia-na-period-do-2027-roku-ta-t271023>

Law of Ukraine "On Information for Consumers Regarding Food Products". <https://zakon.rada.gov.ua/laws/show/2639-19#Text>

Order of the Cabinet of Ministers of Ukraine. <https://www.kmu.gov.ua/npas/pro-skhvalennia-stratehii-reformuvannia-systemy-shkilnoho-kharchuvannia-na-period-do-2027-roku-ta-t271023>

Resolution of the Cabinet of Ministers of Ukraine. <https://www.kmu.gov.ua/npas/pro-vnesennia-zmin-do-poriadku-realizatsii-eksperymentalnoho-proektu-z-veryfikatsii-subiektiv-t101123>

Corresponding authors

Orest Stepanyak,
Chairman of the Board, NGO 'National Foodservice Association'
Head, School nutrition reform project office
stepanyak.orest@gmail.com

Dmytro Sivak,
Project manager for the implementation of food norms and standards, School nutrition reform project office
d.sivak@snr.org.ua



Required citation

Stepanyak, Orest; Sivak, Dmytro (2024) School Meals Case Study: Ukraine. Working Paper. London School of Hygiene & Tropical Medicine. DOI: <https://doi.org/10.17037/PUBS.04672125>



This work is licensed under a Creative Commons Attribution 4.0 International License.

Annexes

Annex 1 - Information on food security, nutrition and health is taken from Electronic Health Care System (EHCS), which is an information and telecommunication system that contains registries and software modules provided by law (data taken as of September 11, 2023).

Age	Total number of children registered in EHCS	Children who have an established diagnosis by age category											
		Underweight		Obesity		Overweight		Micronutrient Deficiency		Delayed growth		Total number of children with at least one of these diagnoses	
		Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
1	2	3	4	7	8	9	10	11	12	13	14	15	16
5	349 766	1 030	0.3	438	0.1	438	0.1	7 389	2.1	937	0.3	5 310	4.1
6	376 814	1 487	0.4	992	0.3	998	0.3	5 921	1.6	1 577	0.4	14 554	3.9
7	402 815	1 610	0.4	1 639	0.4	1 737	0.4	5 078	1.3	2 126	0.5	15 063	3.7
8	423 418	1 559	0.4	2 446	0.6	2 488	0.6	4 165	1.0	2 463	0.6	15 212	3.6
9	456 692	1 564	0.3	3 269	0.7	3 271	0.7	4 159	0.9	2 682	0.6	16 326	3.6
10	448 699	1 676	0.4	3 968	0.9	3 935	0.9	3 701	0.8	2 915	0.6	16 668	3.7
11	463 863	1 905	0.4	4 964	1.1	4 762	1.0	4 124	0.9	3 790	0.8	18 944	4.1
12	439 320	1 859	0.4	5 289	1.2	4 883	1.1	4 149	0.9	4 440	1.0	19 627	4.5
13	438 778	1 968	0.4	5 388	1.2	4 745	1.1	4 563	1.0	5 334	1.2	20 383	4.6
14	453 868	2 503	0.6	5 910	1.3	5 173	1.1	6 063	1.3	7 507	1.7	24 756	5.5
15	437 706	2 869	0.7	5 711	1.3	4 986	1.1	6 828	1.6	8 605	2.0	26 326	6.0
16	423 956	3 023	0.7	5 387	1.3	4 428	1.0	7 058	1.7	8 970	2.1	26 320	6.2
17	441 890	2 917	0.7	5 293	1.2	3 934	0.9	7 228	1.6	8 859	2.0	26 209	5.9
18	427 819	1 849	0.4	4 228	1.0	2 597	0.6	5 969	1.4	5 738	1.3	19 632	4.6
19	417 163	916	0.2	3 188	0.8	1 580	0.4	5 339	1.3	3 540	0.8	14 772	3.5
Total	6 402 567	28 735	0.4	58 110	0.9	49 955	0.8	81 734	1.3	69 483	1.1	289 194	4.5

Note:

1. If 1 child simultaneously had diagnoses of thinness, overweight or obesity - such a child is assigned to one of 3 groups according to the last diagnosis;
2. The data are given for all children who had a corresponding diagnosis (including in the past). If the diagnosis is no longer relevant, the child remains in the appropriate group.
3. Data in the EHCS regarding diagnoses have been recorded since April 2020

The study "Knowledge, attitude and practice regarding healthy nutrition and school nutrition reform among children, parents, managers and employees of educational institutions" conducted in 2021, revealed that 53% of pupils used the services of school canteens every day. 22% of pupils did not do it because of lack of funds and 50% did not do it constantly because they did not like the menu.

The results of another study - the All-Ukrainian sociological study on the decentralization of education management - showed that in the 2020/2021 academic year, only 35.5% of pupils regularly ate in educational institutions, and 30% never ate. On average, pupils rated school meals at 3.4 points (where 1 means very poor quality, and 5 means very good quality). Pupils who did not eat in school canteens rated it lower (on average by 2.9 points). The score of pupils who ate in the school canteen was not much higher - only 3.7 points.

73% of heads of educational institutions, 63% of teachers, 57% of parents and 44% of pupils considered school food to be of high quality (to one degree or another). Dissatisfaction with the quality of food was noted by 1% of heads of educational institutions, 7–8% of teachers and parents, and pupils — 15.4%. Thus, heads of educational institutions gave the highest ratings, and pupils, as the main consumers, rated the quality of food the most negatively.

There was presence of a large number of systemic problems.

Material and technical condition. For the managers of local governments, the main problem was the material and technical condition of canteens in educational institutions, which was reported by 68% of respondents. Among other problems, the most often mentioned were the implementation of nutrition standards and recommendations of the Ministry of Health of Ukraine (36%), search and selection of service providers (31%), as well as product quality control (28%).

For the heads of educational institutions, the most important problems were related to the material and technical condition of the food block/canteen (52%), the furnishing of the canteen (41%), taking into account the wishes of children, parents, and employees of the institution (31%) and the implementation of nutritional norms and recommendations of the Ministry of Health of Ukraine (29%).

Insufficient funding. Respondents called better financing the most important prerequisite for the organization of qualitative nutrition for children in educational institutions. This opinion was shared by both managers of local self-government bodies (77%) and heads of educational institutions (75%).

Awareness and availability of relevant professional knowledge. The second place in terms of frequency of mention takes the need to teach the participants of the educational process the rules of high-quality and healthy nutrition, which was reported by 42% of managers of local self-government bodies and 46% of heads of educational institutions.

Regulatory and legal framework. It should be noted that managers of local self-government bodies mentioned in this context such measures as the development of normative legal acts and conducting internal audits on catering matters more often than the heads of educational institutions.

High prevalence of non-communicable diseases and their behavioral and biological risk factors in Ukraine. Ukraine participates in the implementation of the Action Plan for the prevention and control of non-communicable diseases in the WHO European Region for 2016–2025. The reform was supposed to be one of the important accompanying supporting steps for the implementation of this Plan in Ukraine.

Annex 3 - The responsibilities of the various ministries involved in school meal

The Ministry of Education and Science of Ukraine is responsible for:

- conduct monitoring, providing the necessary methodical and advisory assistance regarding the specifics and requirements for food provision in educational institutions;
- review of staffing standards for employees who provide catering in school institutions;
- train of cooks according to new programs in institutions of professional (vocational and technical) education;
- development and approval of programs for improving the qualifications of cooks in educational institutions, development of new educational materials and updating of existing ones;
- development of educational and practical centers training cooks.

The Ministry of Health of Ukraine is responsible for:

- provision of consultations and clarifications on nutrition issues in the process of implementing the reform of the school nutrition system;
- checking and approving the menu recommended for use in educational institutions;
- development of recommendations and normative legal acts regarding the organization of meals in educational institutions;
- preparation and distribution of materials on the impact of healthy nutrition on improving psychological and physical condition of pupils.

The Ministry of Infrastructure of Ukraine and the State Agency for Reconstruction and Development of Infrastructure of Ukraine are responsible for:

- analysis and determination of the list of educational institutions in need of restoration and/or modernization of food blocks;
- establishment of regulatory requirements for the design of premises of food blocks of educational institutions.

The Ministry of Agrarian Policy and Food of Ukraine and the State Service of Ukraine for Food Safety and Consumer Protection are responsible for:

- identification of target audiences and development of an online course on educational platforms on the development, implementation and application of permanent procedures based on the principles of the HACCP system;
- providing training in the form of webinars on the implementation, application and maintenance of the effectiveness of the HACCP system.

The Ministry of Economy of Ukraine is responsible for:

- peculiarities of procurement in the field of food organization in school institutions;
- procurement consultations.

Regional state administration/Regional military administration, Local self-government bodies are responsible for:

- make strategic decisions at the level of communities in the administrative and economic field of activity of the executive bodies of local councils, to which funds are directed for the restoration and development of educational infrastructure;
- school leaders determine the appropriate form of organization of school meals, approve the menu, are responsible for the proper maintenance of canteens, the timely purchase of quality products or food services, the implementation of the HACCP food safety system and the implementation of national nutrition standards in accordance with the age category of pupils, the promotion of healthy nutrition.

Local self-government bodies are responsible for the implementation of the school nutrition reform: from the selection of the optimal technological model of nutrition organization to the definition of additional preferential categories of children whose nutrition is financed from the community budget.

Annex 4 - The roles of the various stakeholders involved in school meal

Three main target audiences have been defined within the framework of the implementation of the school nutrition reform:

- stakeholders: regional military administration, self-governing bodies, heads of education departments, heads of educational institutions;
- professional communities that are directly related to the implementation of the reform - cooks and food blocks' workers, nurses, teachers, educators, etc.;
- children and parents of schoolchildren and preschoolers.

Regional military administrations play a key role in the implementation of the school nutrition reform in the regions. Their tasks include the following aspects:

- development and approval of the strategy: regional military administrations ensure the development and approval of the regional strategy for the implementation of the school nutrition reform based on the national strategy. This means adapting the general goals and principles to the real conditions of the region;
- financial programs: regional military administrations develops in each region comprehensive programs for the implementation of the strategy and within them regional financial programs, which take into account the financing of training and upgrading of qualifications of cooks and food block workers. They also contribute to the financing or co-financing of the modernization of food blocks in educational institutions;
- culinary hubs: regional military administrations are engaged in the creation of a network of culinary hubs in the regions (a network of educational and practical centers on the basis of professional institutions for training and improving the qualifications of employees of food blocks of educational institutions). It helps to improve nutrition by bringing together experts and resources to improve the food system;
- motivation of communities and local governments: regional military administrations advocate reform among self-governing bodies and motivate communities to actively implement changes in the food system. Financial support and involvement of regional military administrations influence real support and implementation of the reform;
- information and advocacy: regional military administrations inform representatives of local self-government bodies about the process of implementing the reform and its role in the region. They actively interact with them, providing information about the tasks, roles and opportunities associated with changes in the food system.
- raising funds: regional military administrations, local governments help in raising financial resources for the reform at the level of each community, educational institution. This may include finding additional sources of funding and collaborating with other agencies.

Local governments:

- analysis and selection of relevant technological models: local governments conduct an analysis of the current situation in the community and, based on it, choose the most effective model of food organization in schools. They take into account the peculiarities of local conditions, needs and opportunities;
- development of a local strategy: local governments develop a local strategy for the implementation of the reform at the community level, taking into account the chosen model of food organization. This allows the goals to be tailored to the specific needs of local schools;
- expansion of the list of categories of children: local governments are working on expanding the list of categories of children entitled to free meals. They also allocate

the necessary financial resources to ensure the nutrition of these children in accordance with the law;

- ensuring quality control: local governments ensure quality control of the work of service providers for educational institutions in the field of children's nutrition;
- advanced training of specialized personnel: they provide (finance and organize) advanced training of cooks, buyers and other employees related to the procurement of food products and organization of nutrition in educational institutions;
- promotion of the reform: local governments are actively promoting the school nutrition reform among parents and the community. This includes informing about the benefits of the reform, its impact on children's health and attracting public support;
- human resources: ensuring the availability of qualified and motivated food block workers who are able to ensure high-quality and safe food preparation for children.

Heads of educational institutions:

- introduction of new recommended menus: one of the main requirements is the introduction of new, recommended menus, which take into account traditional and modern cooking technologies. This makes it possible to observe the diversity and balance of nutrition in educational institutions, to make it complete and to promote the healthy growth and development of children;
- quality control of food products on the increasing the professional level of those responsible for the food safety system of HACCP;
- raising the professional level of specialists who refuse to purchase food products;
- promotion of healthy nutrition: heads of educational institutions should actively work on popularizing healthy nutrition among children and their parents. This may include the organization of educational events, meetings of parents, where information will be provided about the importance of a balanced diet and its impact on children's health.

Cooks, technologists and food block workers:

- implement changes: create a menu, adjust it according to the children's preferences. They closely cooperate in this area with the administrations of educational institutions, informing them about the process of implementing changes;
- improve their qualifications and implement new knowledge in practice, improving the food system in the educational institution.

Representatives of the medical community: nurses in educational institutions, therapists:

- participate in approving the menu;
- monitor the arrival of products and compliance with hygiene rules at food blocks;
- improve their qualifications and implement new knowledge in practice, improving the food system in the educational institution.

Teachers and educators:

- conduct educational and information events for children and parents, within which they inform about the importance of healthy nutrition for children's health, about the need to review the child's diet at home, etc.;
- inform parents about the reform: its purpose, benefits, opportunities for parents to influence the implementation of the reform.

Children and parents of schoolchildren and preschoolers:

- familiarize themselves with thematic information on the importance of healthy nutrition, form healthy eating habits within their own family. This target audience is the final beneficiary of the reform and the largest among its three target audiences.